REMARKS

Claims 1-63 are pending in the application. Claims 1-63 stand rejected by the Examiner. Dependent claims 6 and 39 were indicated as allowable. Assignee traverses the rejections of the claims.

Claim Rejections - 35 USC § 103

Claims 1 and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sang'udi et al. (U.S. Patent No. 6,480,194) and Anwar (U.S. Patent No. 6,750,864). Claim 63 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Anwar, Sang'udi, and Thomas (U.S. Patent No. 6,490,719). The rejections are traversed.

Claim 1 is directed to a multi-dimension data analysis apparatus. Claim 1 recites in combination with its other limitations a computer data store that stores input data. The input data has dimension variables and at least one target variable. As a non-limiting example, an input data set may contain large data sets that are associated with many dimension variables, such as those shown in Figure 2 of assignee's application (e.g., a marital dimension variable, gender dimension variable, a single mom dimension variable, etc.). The data sets could be so large as to have in some situations hundreds of dimension variables whose values are stored in the data store.

Claim 1 recites in combination with its other limitations that a decision tree processing module automatically determines a subset of the dimension variables for splitting the input data. The splitting by the dimension variable subset can be used to predict the target variable. As shown in Figure 2 as a non-limiting example, five

dimension variables have been automatically selected from the original large set of dimension variables for use as splitting the input data in order to predict a target variable.

The office action asserts that the Anwar reference teaches the decision tree processing module of claim 1 at col. 3, lines 10-17 and further that it determines a subset of the dimension variables for splitting at col. 44, lines 31-34, col. 36, lines 19-23, and col. 20, lines 38-41. Assignee respectfully disagrees. The Anwar reference does not disclose a decision tree that determines a subset of the dimension variables for splitting the input data as required by claim 1 in combination with its other limitations. Instead, the Anwar reference discloses a user, though a manual process, selecting variables: "First, ***the user selects*** one or more dependent variables and a plurality of independent variable from a list of dimensions and members associated with a multidimensional database (MDD)." (See col. 33, lines 26-29; emphasis added.) To further illustrate this distinction between claim 1 and the cited references, claim 1 recites in combination with its other limitations "wherein the decision tree processing module automatically determines the subset of the dimension variables."

Moreover, the Anwar reference is concerned with a different problem than what the subject matter of claim 1 is addressing. For example, the Anwar reference is concerned about using "a decision tree generator where the number of dependent variables is greater than one." (See col. 32, lines 65-67.) The Anwar reference goes into more detail about this as follows:

> In a traditional decision tree, the top of the tree is a single dependent variable or decision and the resulting decision tree shows all independent variables and their values that relate to the dependent variable. However, traditional decision trees are not designed to handle more than one dependent variable. On the other hand, the decision tree generator of the present invention is

> specifically designed to handle two or more dependent variables and provide for efficient visualization of the multi-dependent decision trees using novel graphic constructs.
> (See col. 32, line 65 - col. 33, line 8)

Accordingly, the Anwar reference is concerned with a different problem than what claim 1 is directed.

The other portions of the Anwar reference cited in the office action also do not disclose a decision tree processing module automatically determining a subset of dimension variables (as required by claim 1 in combination with its other limitations):

- Col. 3, lines 10-17 of the Anwar reference: "The present invention also provides data manipulation and analysis or mining techniques including at least one of the following techniques: a multidimensional decision tree generator; a cross-tab and cross-tab cell ranker (ACTG); a decision tree to cross-tab converter; a technique for identifying interesting nodes in a decision tree; a technique for constructing filters corresponding to the tree path leading to the interesting nodes; and a correlation technique."

- Col. 44, lines 31-34 of the Anwar reference: "In order to extract useful information (subsets of training data, statistical indices or the like) from a training set, the DMT has to perform data processing which is related to OLAP tasks."

- Col. 36, lines 19-23 of the Anwar reference: "The user can add dependent variables by grabbing a variable (dimension or member) from a list and drag-n-drop the new variable into the cross-tab wherever desire and the cross-tab control will add the dropped in variable to the cross-tab."

- Col. 20, lines 38-41 of the Anwar reference: "The present invention includes a graphics technique for displaying details of a hierarchical tree in a new and unique manner solving the problem of unrestrained growth in the width of the tree as more variable splits are added. This graphical representation is equivalent to a tree constructed as a set of concentric rings surrounding a root nodal circle as opposed to a rectangular coordinate representation."

None of these passages teach, suggest or motivate that a decision tree processing module automatically determines the subset of the dimension variables as required by claim 1 in combination with its other limitations. Accordingly, the rejection of claim 1 is traversed, and claim 1 and its dependent claims are allowable.

Claim 34 is directed to a computer-implemented multi-dimension data analysis method. Claim 34 recites in combination with its other limitations that a subset of the dimension variables is automatically determined. Because the cited references (whether viewed alone or in combination) do not teach, disclose or suggest such limitations of claim 34, claim 34 and its dependent claims are allowable.

Claim 63 is directed to a computer-implemented method for multi-dimension data analysis by a non-technical individual. Claim 63 recites in combination with its other limitations that a subset of the dimension variables is automatically determined. Because the cited references (whether viewed alone or in combination) do not teach, disclose or suggest such limitations, claim 63 is allowable.

Allowable Subject Matter

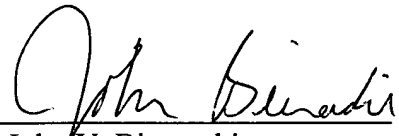
Assignee sincerely thanks the Examiner for indicating that claims 6 and 39 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

CONCLUSION

For the foregoing reasons, assignee respectfully submits that the pending claims should be allowed. Therefore, the examiner is respectfully requested to pass this case to issue.

Respectfully submitted,

Date: May 4, 2005

By: 

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